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REMARKS

Claims 1, 2, 4, 6, 7, 9-14 and 16-19 remain in this application. Claims 3, 5, 8 and 15 have been cancelled. Claims 1, 2, 4, 6, 7, 9-14 and 16-19 have been amended. Claims 1, 10 and 14 are independent claims.

A. Basis for Rejection of Claims

In an Office action dated May 11, 2005, claims 1-19 were rejected under 35 U.S.C. 101 as being directed to non-statutory matter. Claims 14-19 were further rejected under 35 U.S.C. 112 as being indefinite. In response, Applicant has amended independent claims 1, 10 and 14 to satisfy the requirements of Sections 101 and 112.

The Office action further stated that claims 1-4 were rejected under 35 U.S.C. 102(e) as being anticipated by Nakamura et al. Claims 5-19 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Nakamura et al. The Office action alleged that it would be obvious to persons of ordinary skill in the art to modify Nakamura et al. to teach all features of Applicant's invention.

B. Patentability of Claims 14-19 under 35 U.S.C. 112

Claims 14-19 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Specifically, it was stated that the disclosure does not clearly define the word "system," so that a system as claimed could contain a plurality of elements. Applicant has amended claims 14-19 to delete the term "system." In the amended claims, the invention is described as a computer-readable medium containing computer-executable code. A number of module components are identified in the claim. It is respectfully submitted that a person of ordinary skill in the art would readily and clearly understand the meanings of the terms "computer-readable medium" and "computer-executable code." Thus, the amended claims are neither vague nor indefinite.

Applicant asserts that amended claims 14-19 satisfy the requirements of Section 112, second paragraph. Reconsideration is requested.

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C. Claim Rejections under 35 U.S.C. 101

Claims 1-19 were rejected under Section 101, based on the two-prong test of:

(1) whether the invention is within the technological arts; and

(2) whether the invention produces a useful, concrete and tangible result.

In referring to each of independent claims 1, 10 and 14, it was noted in the Office action that mere recitation in the preamble or mere implication of employing a machine or article of manufacture does not infer statutory subject matter as to an otherwise abstract idea, unless there is a positive recitation in the claim as a whole to breathe life and meaning into the preamble. Applicant has amended the independent claims to provide such a positive recitation. In claim 1, it is now stated that an automatic process is defined by integration of the steps of receiving, monitoring, and employing, with the steps of "determining said required test sample size" and "determining said post-test estimation." Support for this "integration" may be found in the last paragraph of the SUMMARY OF THE INVENTION. The preamble of claim 1 states that the method is _computerized_ and the body of the claim now states that the sequence of steps provides an "automatic process." Thus, the method described in the _amended_ claim 1 involves the technological arts.

Similarly, claim 10 has been amended to describe the method as being "computerized" and as comprising "computer-executable process steps." Within the body of the claim, it is stated that the negative binomial sampling is automated and that the systematic sampling is also automated. Consequently, the preamble includes a positive recitation with respect to the technological arts and the body of the claim breathes further life into this aspect.

Claim 14 has been amended to describe the invention as being a computer-readable medium containing computer-executable code. The body of claim 14 describes the elements as being module components. Since the invention is described as being a computer-readable medium containing computer-executable code, it is clear that the invention involves and uses the technological arts. This conclusion is reinforced by the description of the claimed elements as being module components.

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Turning to the second-prong of the Section 101 test, Applicant has amended the claims in a manner that relies upon the holding of <u>State Street Bank and Trust Co. v Signature Financial Group, Inc.</u>, 47 USPQ2d 1596 (Fed. Cir. 1998). In <u>State Street</u>, the court held that the transformation of data (representing discrete dollar values) by a machine through a series of mathematical calculations into a final share price constitutes a practical application of a mathematical algorithm, formula or calculation, because it produces a useful, concrete and tangible result, namely a final share price momentarily fixed for recording purposes and even accepted and relied upon by regulatory authorities. Claim 1 has been amended to state that the "post-test estimation of said subsequent visitor behavior" is an estimation configured to provide a basis for determining interactions during subsequent visits to the network accessible site(s). Thus, similar to <u>State Street</u>, the result of the claimed invention may be relied upon by the relevant authorities. In independent claim 10, the negative binomial sampling is utilized to determine an adaptive minimum sample size for estimating a conversion rate for subsequent visitors, <u>such that an estimated conversion rate is available for basing determinations regarding subsequent operations of the network accessible site(s)</u>. Within independent claim 14, the second module component is configured to generate updates of the conversion-related estimate, <u>thereby enabling operations at the network accessible site to be determined on the basis of the conversion-related estimate</u>. The invention described in independent claims 10 and 14 generates information that can be relied upon by "authorities" related to the network accessible site(s).

Applicant respectfully asserts that the amended claims satisfy the requirements of Section 101. Reconsideration of the claims is requested.

D. <u>Patentability of Claims 1, 2, 4 and 9</u>

The Office action rejected claims 1-4 under 35 U.S.C. 102(e) as being anticipated by Nakamura et al. In response, Applicant has amended independent claim 1 to incorporate subject matter from original claim 5 and from original claim 8. Neither claim 5 nor claim 8 was alleged to be anticipated by the teachings of Nakamura et al. Rather, claims 5 and 8 were rejected under 35 U.S.C. 103(a), since the Office action correctly noted that Nakamura et al. does not teach features described in these claims. It follows

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that the amendment to claim 1 overcomes the rejection based upon Section 102(e), so that only the Section 103(a) rejection remains.

In amended claim 1, the method includes determining a required test sample size for the monitoring of actual behavior of visitors to a site in order to provide updated estimations of subsequent visitor behavior. The required test sample size is adaptively adjusted on the basis of achieving a target confidence level regarding the updated estimations of subsequent visitor behavior. Then, a post-test estimation of the subsequent visitor behavior can be determined. This includes selecting between using a systematic sampling approach and using a negative binomial sampling approach. The negative binomial sampling approach is selected in response to unavailability of the required test sample size.

Support for the amendment to claim 1 may be found in various portions of the application as originally filed. For example, in the SUMMARY OF THE INVENTION, on page 3, lines 17-31, it is noted that the third component of the method or system is one in which the sampling size is determined using systematic sampling. However, a shortcoming of the systematic sampling approach is that there is a concern that the expected number of visitors will not be reached, so that the test sample size will not be reached. This shortcoming is addressed at the fourth component. Specifically, negative binomial sampling is utilized. Thus, the measure of the minimum test sample size becomes dynamically adjustable. The fourth component operates best in situations in which there may be a low number of visitors to a site. Further support may be found on page 12, lines 27-35, which states that the system can include both sampling approaches, with the negative binomial sampling being utilized until a threshold number of samples is acquired and the systematic sampling being activated thereafter.

Applicant respectfully points out that the combination of features of amended claim 1 was not addressed in the Office action, since claims 5 and 8 were not associated in the manner supported by the application as originally filed. That is, claim 5 was independent of claim 8, so that the features of claims 5 and 8 were considered separately.

Applicant has identified a shortcoming of the systematic sampling approach and has provided a solution that allows the systematic sampling approach to remain as an option.

Nakamura et al. does not teach or suggest enabling selection between using a systematic sampling approach and using a negative binomial

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sampling approach. Original claim 6 described a step of determining the required test sample size as including utilizing negative binomial sampling. In rejecting original claim 6, it was not asserted that Nakamura et al. teaches the use of negative binomial sampling for determining a required test sample size. Original claim 7 described a step of determining the required test sample size as including utilizing systematic sampling. In the rejection of original claim 7, it was not asserted that Nakamura et al. teaches this feature. Rather, claims 6 and 7 were rejected based upon assertions given "official notice."

The conclusion as to the "obviousness" of modifying or adding to the teachings of Nakamura et al. relies upon official notice, but <u>separately</u> with respect to the systematic sampling approach and the negative binomial sampling approach. Amended claim 1 provides that both approaches are enabled and provides that there is a selection between the two approaches, with the negative binomial sampling approach being selected in response to unavailability of a required test sample size for monitoring actual behavior of visitors to at least one network accessible site. Applicant recognizes the appropriateness of official notice, as set forth in MPEP 2144. Because there is no "clear and unmistakable" technical line of reasoning underlying a decision to take official notice with regard to the features of <u>amended</u> claim 1, it is respectfully submitted that Nakamura et al. does not present a *prima facie* case of obviousness.

In view of the amendments to claim 1, reconsideration of the claim and its dependent claims is respectfully requested.

E. <u>Patentability of Amended Claims 10-13</u>

Independent claim 10 was rejected as being obvious under Nakamura et al. It was noted that the prior art patent does not teach the utilization of negative binomial statistical sampling or the subsequent determination of a required sample size based on a target confidence level. However, official notice was taken of these two aspects.

Applicant has amended claim 10 to more clearly distinguish the claimed invention from the prior art. In addition to the step of utilizing automated negative binomial sampling to determine an adaptive minimum sampling size for estimating a conversion rate for subsequent visitors of the site, the method includes activating automatic systematic sampling to determine the adaptive minimum sampling size <u>upon detection of acquiring a</u>

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threshold number of samples. Thus, the invention described in claim 10 enables both negative binomial sampling and systematic sampling.

Support for the amendment may be found on page 12, lines 27-35 of the application as originally filed. In this portion of the application, it is stated that the systematic sampling works well in applications in which there is a high and predictable number of visitors, but negative binomial sampling is better suited for applications in which the number of visitors is either predictably low or unpredictable. Therefore, the negative binomial sampling may be utilized until a threshold number of samples is acquired, after which the systematic sampling may be activated.

Many of the remarks made with regard to the patentability of amended claim 1 apply to the determination of patentability of amended claim 10. It is agreed that Nakamura et al. does not teach the utilization of negative binomial statistical sampling. It is not asserted in the Office action that it would be obvious to modify Nakamura et al. to utilize negative binomial sampling, but then activate automatic systematic sampling upon detection of acquiring a threshold number of samples. Applicant asserts that this dual capability is not old and well known in the art, so that official notice should not be taken.

Reconsideration of claim 10 to address the features added by amendment is respectfully requested.

F. Patentability of Claims 14 and 16-19

Independent claim 14 has been amended to include the fourth module component that was described in the SUMMARY OF THE INVENTION of the application as originally filed. The third module component applies systematic sampling, but a shortcoming of this approach is that there is a concern that the expected number of visitors will not be reached, so that the calculated test sample size will not be reached. To address this short-coming, the forth module component utilizes negative binomial sampling to generate measures of test sample size for occurrences in which the required test sample size of the third module component is unsatisfied.

Similar to claim 10, many of the comments with regard to the patentability of claim 1 apply to the determination of patentability of amended claim 14. Nakamura et al. does not teach or suggest providing a fourth module component that utilizes negative binomial sampling to generate
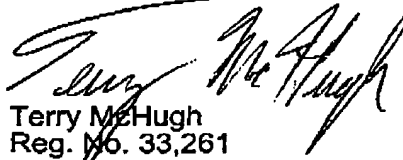
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measures of test sample size for occurrences in which the required test sample size determined by a third module component is unsatisfied.

In rejecting original claim 15, the Office action asserted that it would be obvious to one skilled in the art to use a plurality of statistical sampling techniques, "the resulting system being capable of efficiently processing (analyzing) large amounts of data and for more accurately characterizing the general population from the sampled population." Applicant respectfully requests support for this conclusion. More importantly, it is respectfully noted that the modification to the Nakamura et al. teachings, as proposed in the Office action, would not teach or suggest the invention described in amended claim 14, since the proposed modification would not suggest further modification to configure a fourth module component to utilize negative binomial sampling for occurrences in which the required test sample size of the third module component is unsatisfied.

It is submitted that without the aid of the pending application, it would not be obvious to modify the detailed description of Nakamura et al. to more closely approach the invention described in amended claim 14.

Applicant respectfully requests reconsideration of the claims in view of the amendments and remarks made herein. A notice of allowance is earnestly solicited. In the case that any issues regarding this application can be resolved expeditiously via a telephone conversation, Applicant invites the Examiner to call Terry McHugh at (650) 969-8458.

Respectfully submitted,

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Terry McHugh
Reg. No. 33,261

Telephone: (650) 969-8458
Facsimile: (650) 969-6216